

REMARKS

In view of the above amendments and following remarks, reconsideration and further examination are requested.

In the Final Rejection mailed June 2, 2005, claims 5-8 were rejected under 35 U.S.C. 103(a) as being obvious over a combination of Talieh and Ashjaee et al.

By the current Amendment, claim 5 has been amended and claims 9-12 have been added. Claim 5 has been amended by reciting that the plating liquid impregnation material comprises a **porous ceramic**. Support for such an amendment can be found on page 17, lines 8-9 of the specification, for example. Claims 5-12 are allowable over the combination Talieh and Ashjaee et al. for the following reasons.

According to the present invention, a high resistance structure having an electrical conductivity lower than electrical conductivity of a plating liquid is constituted by holding the plating liquid in a plating liquid impregnation material (porous ceramic). The porous ceramic per se is an insulator, but the high resistance structure is constituted by causing the plating liquid to enter into the porous ceramic and follow a considerably long path in a thickness direction thereof. By providing a high electric resistance structure such as a porous ceramic between the anode and the substrate, a sheet resistance R_4 (which is resistance at a certain point) can be ignored. This makes it easier to form a plated film having a uniform film thickness over an entire surface of a substrate.

A porous ceramic is generally harder than the substrate, and accordingly, were plating to be performed while a plating liquid impregnation material of a porous ceramic was in contact with the substrate, this plating liquid impregnation material could damage the substrate. Therefore, according to the present invention, plating is performed without bringing the substrate into contact with the plating liquid impregnation material (porous ceramic). Furthermore, because the plating liquid impregnation material does not contact the substrate, the plating liquid impregnation material can be generously moved with respect to the substrate.

Neither Talieh nor Ashjaee et al. discloses nor suggests a plating liquid impregnation material that comprises a porous ceramic.

In this regard, in Talieh mechanical pad 32, which corresponds to the claimed plating liquid impregnation material, is said to be of a type used in chemical mechanical polishing and is preferably

made of a non-conductive, porous type material such as polyurethane (see column 4, lines 34-38). Thus, Talieh fails to disclose or suggest a "porous ceramic" plating liquid impregnation material as required by claim 5.

Similarly, Ashjaee et al. discloses that pad 8, which corresponds to the claimed plating liquid impregnation material, has a surface that may be abrasive, or the pad 8 may contain an abrasive material (see column 2, line 58-59). Thus, Ashjaee et al. also fails to disclose or suggest a "porous ceramic" plating liquid impregnation material as required by claim 5.

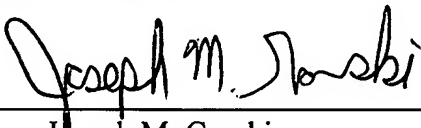
Accordingly, because each of Talieh and Ashjaee et al. fails to disclose or suggest a "porous ceramic" plating liquid impregnation material as required by claim 5, claim 5 is not obvious over a combination of these references. Thus, claims 5-12 are allowable.

In view of the above amendments and remarks, it is respectfully submitted that the present application is in condition for allowance and an early Notice of Allowance is earnestly solicited.

If after reviewing this Amendment, the Examiner believes that any issues remain which must be resolved before the application can be passed to issue, the Examiner is invited to contact the Applicants' undersigned representative by telephone to resolve such issues.

Respectfully submitted,

Koji MISHIMA et al.

By: 

Joseph M. Gorski
Registration No. 46,500
Attorney for Applicants

JMG/edg
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
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